



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,643	03/23/2004	Jeffrey J. Schroeder	35691US1	2569
116	7590	11/04/2005	EXAMINER	
PEARNE & GORDON LLP 1801 EAST 9TH STREET SUITE 1200 CLEVELAND, OH 44114-3108			VO, HAI	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/806,643

Applicant(s)

SCHROEDER ET AL.

Examiner

Hai Vo

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-7, 10-12, 15-25, 27-36, 39-42, 44 and 45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-7, 10-12, 15-25, 27-36, 39-42, 44 and 45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____  | 6) <input type="checkbox"/> Other: _____                                    |

1. The indicated allowability of claims 19, 20, 26 and 39-46 is withdrawn in view of the newly discovered references to Pollock (US 4,525,406), Hurwitz (US 3,833,951), and Ivester et al (US 5,299,335). Rejections based on the newly cited references follow. Accordingly, prosecution on the merits of this application is reopened on claims 2-7, 10-12, 15-25, 27-36, 39-42, 44 and 45.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 2-7, 10-12, 19, 20, 33, 35, 39-42, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollock (US 4,525,406) in view of Hurwitz (US 3,833,951). Pollock teaches a thermal insulation layer comprising a first metallic outer layer, a second metallic outer layer and a foam layer disposed between the first and a second metallic layer. Pollock discloses the thermal insulation layer further comprising a layer of polyester fluffy fibers laminated to the second metallic outer layer opposite the foam layer. The fluffy fiber layer is about 10-20 mm thick (figures 1 and 2 column 1, lines 60-62). Pollock discloses the foam being 3 mm thick within the claimed range (column 1, lines 48-50). Pollock does not teach the thickness of the metallic layer. Hurwitz, however, teaches a sleeping pad comprising a

metallic layer having a thickness of 2 to 4 mils within the claimed range.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the metallic layer having a thickness as taught by Hurwitz motivated by the desire to provide rapid dissipation of heat.

Pollock does not teach the foam made from polyurethane. Hurwitz, however, teaches a sleeping pad comprising a polyurethane foam. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the polyurethane foam for the polyethylene foam because these two foam materials have been shown in the art to be recognized equivalent cushioning materials for bedding materials.

Pollock as modified by Hurwitz does not specifically disclose the reversed deflectability, area density, vibration damping and acoustical properties of the foam. However, since the modified foam is made of the polyurethane foam which has a thickness within the claimed range. The foam is suitable for use as a duvet. Likewise, the foam is sufficiently pliant to be bent to and accommodate a particular shape and contour to which the duvet is to be bent. Therefore, it is not seen that the modified foam would have performed differently than the foam of the present invention in terms of reversed deflectability, area density, vibration damping and acoustical properties as recited by the claims.

4. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollock (US 4,525,406) in view of Hurwitz (US 3,833,951) as applied to claim 19 above, further in view of Ivester et al (US 5,299,335). Pollock does not teach the porous fabric embedded within the foam layer (column 2, lines 47-50). Ivester, however, disclose the fragrance-releasing pillow comprising strips of porous fabric with one of compartment formed therein. Ivester teaches the compartments hold the capsules impregnated with a volatile substance. Ivester disclose the insert placed centrally in the foam layer (column 3, lines 14-16). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to embed the insert as taught by Ivester in the polyethylene foam of Pollock motivated by the desire to provide means for masking odor which are absorbed by duvet.

Ivester does not specifically disclose the porous fabric carrier made from non-woven polypropylene fibers. The examiner takes Official Notice that it is common and well known in the bedding material art that the porous fabric is made from non-woven polypropylene fibers.

5. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollock (US 4,525,406) in view of Hurwitz (US 3,833,951) as applied to claim 19 above, and further in view of Hasegawa et al (US 4,923,904). Pollock does not specifically disclose the foam layer being made from an expandable foaming composition as recited in the claims. However, Hasegawa discloses a polyurethane foam for use in heat insulating materials. Therefore, it would

have been obvious to one having ordinary skill in the art at the time the invention was made to use the polyurethane foam as taught in the Hasegawa invention as the foam layer because such is an intended use of the material and Hasegawa provides necessary details to practice the invention of Pollock.

6. Claims 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollock (US 4,525,406) in view of Hurwitz (US 3,833,951) as applied to claim 19 above, further in view of the "Dynamat and Automotive" article, 1991.

Pollock discloses that the thermal insulating layer can be used in industrial situations where a lightweight, flexible, thermal insulating layer is required (column 3, lines 15-20). The "Dynamat and Automotive" article shows that the lightweight, flexible Danamat product having been used as a shield from exhaust engine and solar heat. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the thermal insulating layer of Pollock on the car engine because the lightweight and flexibility makes the thermal insulating layer of Pollock suitable as a shield from exhaust engine and solar heat as the Danamat products.

7. Claims 24, 27-32, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holtrop et al (US 4,557,970) in view of WO 97/42844. Ohira et al (US 6,645,586) is relied on as an equivalent form of WO 97/42844. Holtrop discloses a laminate structure comprising a aluminum foil layer 21, a first foam layer 12, a second foam layer 13 dissimilar to the first foam layer

adhered to the first foam layer 12 opposite the aluminum foil layer 21 (column 4, lines 17-18, figure 1). The first foam layer made from polystyrene foam has a thickness of 3.6 mm while the second foam layer of polyurethane foam has a thickness of 6.4 mm (example 1). The laminate structure has improved acoustical absorption. Likewise, the laminate structure is internally damped against vibration. Holtrop does not specifically disclose the second foam layer made from a polyvinyl nitrile foam. Ohira, however, teaches the sound absorptive foam for use in the interior material of vehicles made from polyurethane foam, polyacrylonitrile foam which is known as polyvinyl nitrile foam (column 46, lines 30-32, claim 37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the polyacrylonitrile foam for the polyurethane since the two foam materials have been shown in the art to be recognized equivalent sound absorptive foams for use in the interior material of vehicles.

Holtrop does not specifically disclose the foam layer being effective to withstand operative heat shield temperature of at least 1000°F and to dampen acoustic tonal frequencies below 200 Hz. However, since the foam layer of Holtrop as modified by Ohira is made from the same material and has a thickness within the claimed range. Therefore, it is not seen that the foam of Holtrop as modified by Ohira would have performed differently than that of the present invention in terms of heat shield and vibration absorption. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of

identical chemical composition can not have mutually exclusive properties.

The same token is applied to the area density of the insulation structure. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete (Note discussion found in Ex parte Slob, 157 USPQ 172). Therefore, it is the examiner's position that the area density would be inherently present.

8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holtrop et al (US 4,557,970) in view of WO 97/42844 as applied to claim 24 above, further in view of Lynn et al (US 6,093,481). Holtrop does not specifically disclose the thickness of the aluminum facing sheet of the laminate structure. Lynn, however, teaches a laminate structure for use in sound insulating having a facing sheet of aluminum with a thickness from 0.3 mil to 5 mils (column 5, lines 20-25) within the range set out in the claims. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the facing sheet of aluminum having a thickness instantly claimed because such a thickness is known and typical for the facing sheet for use in the acoustic insulation and Lynn provides necessary details to practice the invention of Holtrop.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571)

272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

Hai Vo

**HAI VO  
PRIMARY EXAMINER**